



# HDX-192 DSP Expansion Card Installation Guide

HDX-192 DSP Expansion Cards add mixer and plug-in processing capacity to a VENUE | S6L system. HDX cards are installed in the VENUE | E6L engine. A total of four HDX cards can be installed in an E6L.

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## Required Materials

- HDX-192 DSP Expansion Card package, which includes:
  - (1) HDX-192 DSP Card
  - (1) HDX TDM Flex Cable
- Phillips #1 screwdriver (not included)
- Anti-Static wrist strap (not included)
- Foam or other soft surface to place the card on (not included)

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## Installing the DSP Card

Installing a DSP card in E6L consists of the following steps:

- Removing the E6L engine core
- Installing the card
- Connecting the HDX TDM cable between HDX cards
- Replacing hardware
- Confirming Installation

## Removing the E6L Engine Core

HDX cards are installed in the E6L engine core, which slides out of the E6L chassis.

### To remove the E6L engine core

- 1 Put on your anti-static wrist band and configure according to its instructions.
- 2 Shut down your system, and disconnect any cables connected to your E6L engine.
- 3 Place your E6L on a table or other flat surface that provides enough room for the E6L engine core to be removed comfortably. Make sure your surface is clear of any debris.

- 4 On the back of the E6L, loosen the four thumbscrews that secure the core to the engine chassis.

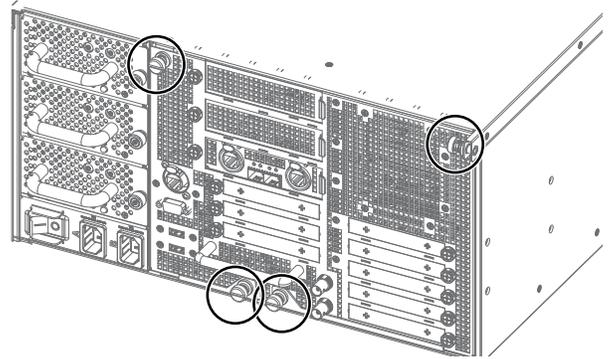


Figure 1. Four thumbscrews on the back of the E6L

- 5 Simultaneously pull the two bottom thumbscrews outward so the latches they are attached to are fully extended, as shown in Figure 2.

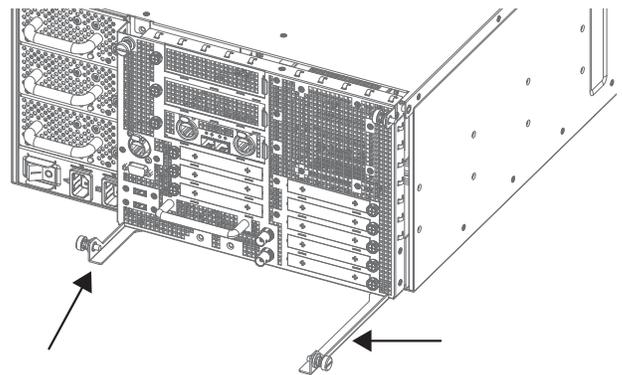


Figure 2. Latches fully extended

- 6 Using the handle, slowly slide the core partially out, locate the interior catch on the right side of the tray, and press it to release the core from the chassis.

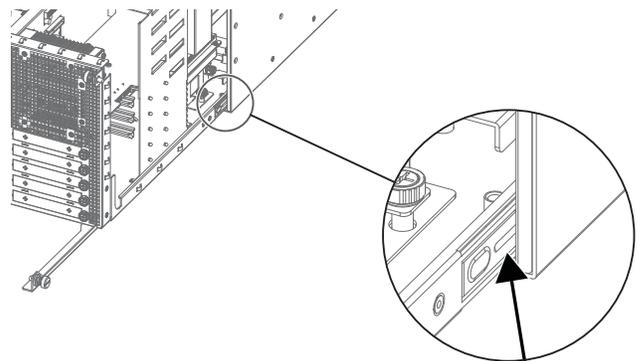


Figure 3. Location of the interior catch

- 7 Slowly slide the core out of the E6L chassis completely, and place it on your work surface.

**▲** *The core will not slide out of the E6L chassis until the latches are fully extended and the catch has been released. If you experience any resistance, make sure the latches are fully extended before pulling.*

## Installing the Card

The E6L engine core has four PCIe slots for DSP cards, and are numbered sequentially from top to bottom as you face the open side of the engine core (slots 1–4). Install your DSP expansion card in the open PCIe slot below the currently installed card(s). You must first remove the retaining bracket before installing the card.

### To remove the DSP card retaining bracket and install the card:

- 1 Looking inside the core from the right side, locate the DSP assembly retaining bracket.
- 2 Locate the thumbscrew that secures the bracket to the bottom of the unit and loosen it completely.



Figure 4. HDX card Bracket thumbscrew

- 3 Locate the two Phillips head screws on the top of the bracket, remove them, carefully remove the bracket, and set them all aside.

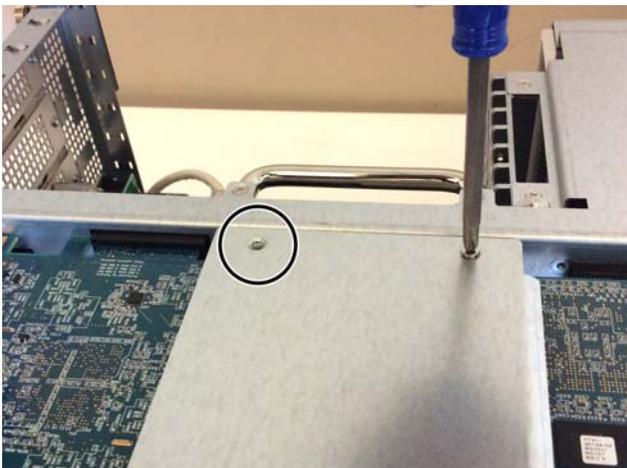


Figure 5. Removing one of two HDX card bracket screws

- 4 Locate the open PCIe slot below the topmost currently installed DSP card, and remove the blank faceplate by unscrewing the corresponding screw. Set the screw aside to secure the HDX card after it is installed. The faceplate can be discarded.

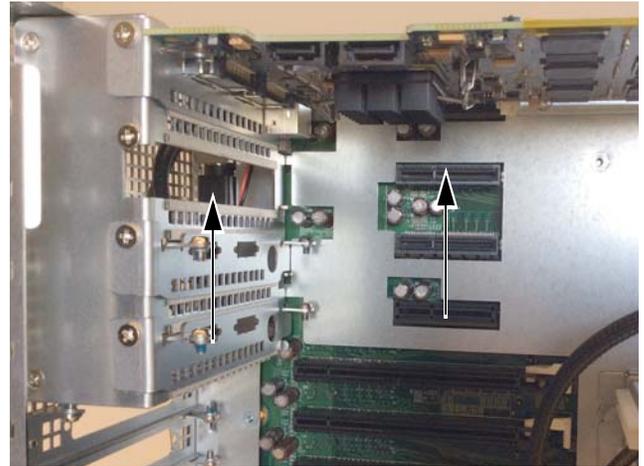


Figure 6. Open PCIe slot (right, 2nd slot shown), with blank faceplate removed (left)

- 5 Remove the DSP card from its packaging and place it on your foam surface, oriented as shown in Figure 7.

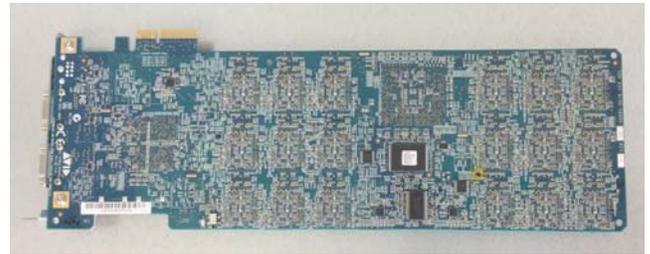


Figure 7. Top view of the HDX card

- 6 Disconnect the power cables connected to any HDX cards installed above the slot in which you are installing the card.

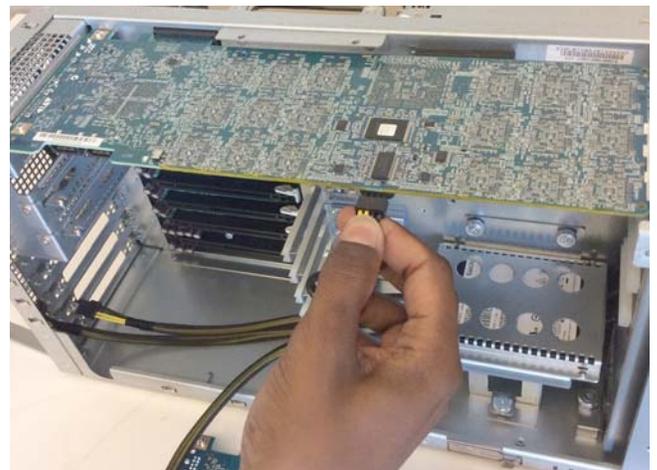


Figure 8. Disconnecting the power cable of the top HDX card

- 7 Align the DSP card's PCIe connector with the corresponding PCIe slot, and gently press the card into the PCIe slot.

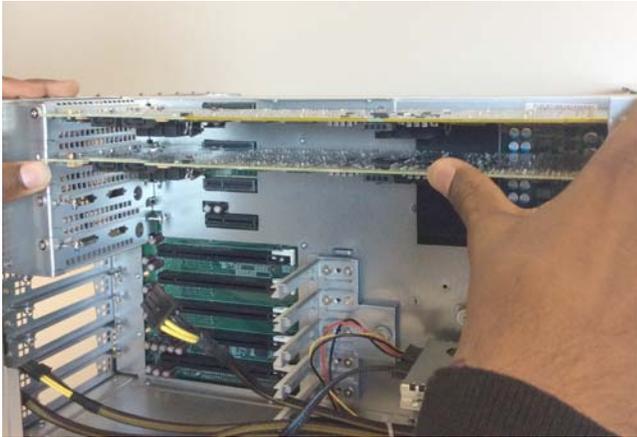


Figure 9. Pressing the HDX card into the slot

- 8 When the DSP card is properly seated in its slot, tighten the screw on the front bracket of the HDX card to secure it to the chassis.



Figure 10. Tightening the front bracket screw

- 9 Locate a loose black and yellow HDX card power cable at the bottom of the unit, and, with the cable connector locking clip facing down, push the connector into the port until it clicks. Make sure the connector is securely connected.
- 10 Reconnect a power cable to the top card. All HDX cards should have power cables attached.

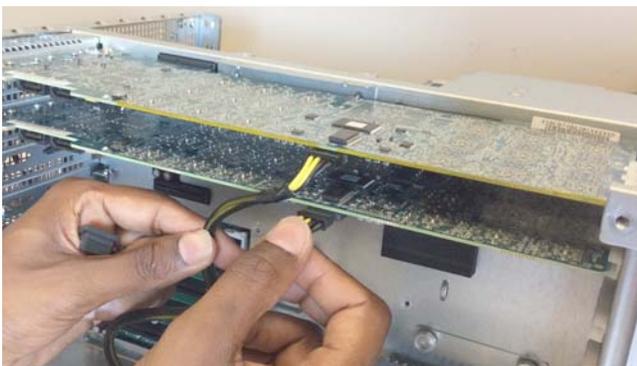


Figure 11. Connecting HDX power cables

## Connecting the HDX TDM Cable

In systems that have more than one card, you must connect all the HDX cards to each other with HDX TDM cables (custom SATA cables). Each HDX card has two ports along the top of the card, labeled IN and OUT. Data communication across multiple cards is achieved by connecting the cable from the OUT port of the first card to the IN port of the next card.

### To connect the HDX TDM cable:

- 1 Connect the end of the HDX TDM cable labeled OUT to the OUT port of the upper HDX card.
- 2 Connect the other end of the HDX TDM cable, labeled IN, to the IN port of next the HDX card, as shown in Figure 12



Figure 12. Properly Connected Flex Cable

- 3 For any additional cards, connect each additional card to its preceding card. Use additional HDX TDM cables to connect card pairs together, as described above, until all cards are connected. (Each HDX card is packaged with an HDX TDM cable.)

## Replacing E6L Hardware

After installing the cards, replace the retaining bracket and put the core back into the E6L chassis.

### To replace E6L hardware:

- 1 Carefully place the HDX card assembly retaining bracket back into position, making sure to not disturb the surface of the DSP cards in the process, and tighten the captive thumbscrew securing the bracket to the bottom of the E6L engine core.
- 2 Replace the two screws at the top of the retaining bracket.
- 3 Slide the core back into the E6L chassis, making sure the connectors face outward.  
When the core is fully seated into the chassis, the two latches at the bottom of the chassis should fully collapsed.
- 4 Tighten the four thumbscrews to secure the core to the chassis.

## Confirming Installation

After installing HDX cards, confirm that you successfully installed them.

### To confirm installation:

- 1 Connect power to the E6L, and connect an audio network cable from your S6L control surface to E6L.
- 2 Power on your S6L and E6L.

**⚠** *Your S6L system may initiate a firmware update of your newly-installed HDX card. If so, follow the on-screen prompts to ensure a successful installation.*

- 3 On the external VENUE software screen, go to the Options > Devices page. In the HDX DSP section, tap the tab (1–4) corresponding to the slot in which you installed the card. The 18 DSPs provided by the HDX card should appear as Available.

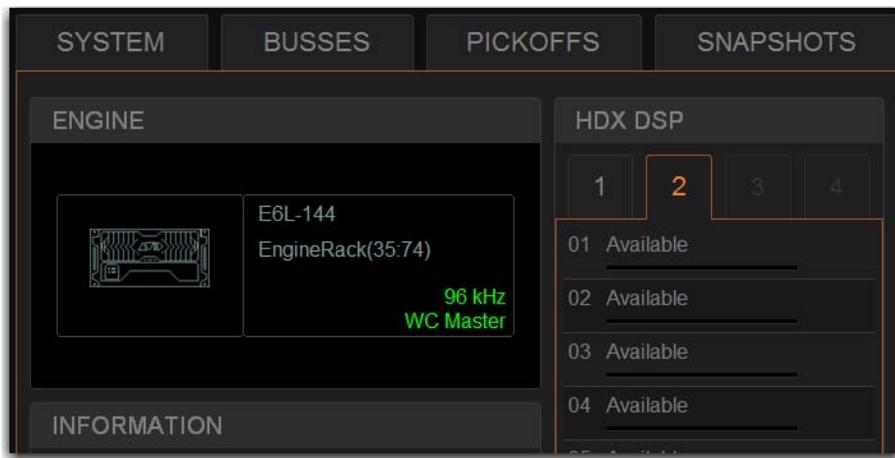


Figure 13. Options > Devices page showing the DSPs available on the HDX card installed in slot 2